THE
VETERINARY RECORD.

The Official Journal of the National Veterinary Medical Association of Great Britain and Ireland, Limited.

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S., 1888.

No. 35. SEPTEMBER 2, 1922. VOL. 2.

Lord Lascelles and the R.C.V.S.

The Royal College of Veterinary Surgeons has, with the permission of Lord Lascelles, made public the correspondence which has passed between its President (Mr. H. Sumner) and Lord Lascelles in connection with the latter's recent speeches on veterinary research.

Mr. Sumner wrote that the College was and had always been in entire agreement with Lord Lascelles as to the necessity for research into animal diseases, but the State assistance hitherto granted had been so meagre as to be characterised as a national disgrace, and the College had no funds for such research.

As to the powers and duties of the College, Mr. Sumner suggested that Lord Lascelles had been misinformed, for the institution had nothing whatever to do with the control of animal diseases. The powers conferred on the Royal College were confined to fixing the subjects of examination qualifying for the diploma of membership of the College, appointing examiners, and carrying out the necessary examinations. It had also power to hold examinations for the post graduate diploma in veterinary state medicine and the diploma of fellow of the College.

Mr. Sumner also combated the statement that the curriculum of the College included no other form of learning besides veterinary science.

Lord Lascelles replied as follows to the president's letter :—

I am grateful for your letter of August 17th, as it enables me to correct certain points which appear to have been misunderstood in my speeches at Northallerton and Harrogate.

Nothing in my speeches could be interpreted to mean that the Royal College of Veterinary Surgeons had power to order one method or another of treating infectious diseases ; nor that the present methods are wrong according to the existing knowledge of the diseases. Such methods have, and must have, the authority of Parliament, although Parliament has, I believe, acted in accordance with the recommendations of the Royal College of Veterinary Surgeons in dealing with the extermination of disease.

My whole speech at Northallerton was an appeal to farmers to turn, not to Parliament (which has used that power), but to the Royal College of Veterinary Surgeons, to improve its scientific research work, and thereby to devise methods which will be less costly to the farmer than the present antiquated ones. Not until this is done can the appeal to Parliament be usefully made.

I regret that my remark about the syllabus of the Royal College, taken by itself, does not completely state the case. But the following sentence, "the best brains are not satisfied with a higher education which limits them to one subject only," shows that I referred to higher education, and makes it clear that my meaning is very close to yours when you say that, "without some such scheme, very few men could afford to take up the long and special veterinary course after having obtained a general university education."

If I may say so, it is a scheme to effect this object that I wish to recommend. I am anxious to see the work of veterinary research brought more closely into touch with the great centres of pure scientific research and the work of the latter allied to the special branch of veterinary science as closely as it is to medical science.—*The Times.*

Animal Diseases Research Association.

The annual general meeting of the Animal Diseases Research Association was held within the Chambers of the Highland and Agricultural Society, 3 George IV. Bridge, Edinburgh, on Wednesday, 26th July, Mr. Colin Campbell, of Jura, president, in the chair. The report for the year to 31st March, 1922, which had been circulated among the members, was adopted. The president was re-elected and Mr. George G. Mercer, of Southfield, Dalkeith, was appointed vice-president. Directors for next year were appointed. The appointment of Mr. W. R. Milne, W.S., as secretary and treasurer, made by the directors, was confirmed.

In the late autumn of 1921 the Treasury agreed, under conditions laid down, to make a grant in aid of the capital expenditure of the association of a sum not exceeding £3,500, and in aid of revenue of a sum not exceeding £2,300 as might bring the State contribution up to one-half of the current expenditure of the association in respect of the first twelve months after research work began. One of the conditions made by the Treasury was that a technical advisory committee of six members be set up, and the following gentlemen agreed to act :—Professor O. Charnock Bradley, Royal (Dick) Veterinary College; Professor Browning, Glasgow University ; Mr. Charles Douglas, of Auchlochan ; Dr. R. Stewart MacDougall, Edinburgh ; Professor James Lorrain Smith, Edinburgh

University; and Mr. James Wood, Board of Agriculture for Scotland.

The Directors later appointed Professor S. H. Gaiger, F.R.C.V.S., and Mr. Thomas Dalling, M.R.C.V.S., to be full time Chief Investigators of the Association. These gentlemen took up duty on 1st April, 1922, and have been engaged since investigating various animal diseases. A temporary arrangement was made with the Governors of the Glasgow Veterinary College for carrying on the research work in the College. More permanent and different arrangements are being considered.

The Chairman impressed upon the meeting the desirability of interesting as many stock owners in the Association as possible, as the support given by the Government must to some extent depend upon the interest shown by the stock owners of Scotland.

Sir F. Smith on Early Veterinary Anatomy.

In the course of a series of notes of the proceedings of the International Congress of the History of Medicine, in London, which came to an end on July 22nd, the *British Medical Journal* says:

"Major-General Sir F. SMITH, who contributed a paper on the position of veterinary anatomy in England during the sixteenth, seventeenth, and eighteenth centuries, said that the veterinary knowledge in England during the sixteenth and eighteenth centuries was very small, but considering that anatomy was only beginning to be taught in the fifteenth century, and that no veterinary schools were formed until the eighteenth century, this was not surprising. In the middle of the sixteenth century Thomas Blundell published a book on the study of diseases of horses, but the information it contained was for the most part traditional and often absurd. An Italian, Ferraro, of the Neapolitan school of horsemanship, wrote a work on the diseases of horses, which contained two anatomical plates which showed a great lack of knowledge of anatomy. The father of veterinary anatomy was the Italian, Ruini, whose anatomical diagrams showed that at least he really studied the subject, and had some conception of the circulation. France and Italy had led in veterinary knowledge, but in this country there appeared to be a national indifference to precise knowledge of the subject.

Professor COLE considered that Carlo Ruini was the father of veterinary science. He was born in Italy in 1530, and became a senator of Bologna. In 1598 he published the first real book on veterinary science and the infirmities of the horse. His diagrams showed that he was the first who really knew anything about the anatomy of the horse. His work went through four editions in Paris, was published in London in 1669, and was often plagiarized. M. LEON MOULE said that Greek and Latin writers had confused several serious diseases of horses with glanders. "Malleus aridus" corresponded to acute glanders, and "malleus humidus to chronic glanders, but "malleus articularis" was a rheumatic affection, and the "malleus elephantiasis" resembled the elephantiasis of the Arabs. Mr. H. J. SEVILLA said that there was reliable evidence that the Greeks had a very good knowledge of diseases of the horse and of veterinary surgery."

Veterinary Surgeons Act Prosecutions.

CASES AT WIMBORNE AND BRIDGWATER.

At Wimborne on Friday, August 18th, Charles Wrigley, of Kinson, was summoned on a charge that he, not being on the registry of veterinary surgeons, and not holding at the time of the passing of the Veterinary Surgeons Act, 1881, a veterinary certificate of the Highland and Agricultural Society of Scotland, did use and take an addition and description, to wit, the word "Vet.," thereby stating that he (defendant) was specially qualified to practise a branch of veterinary surgery, contrary to the statute, etc.

Mr. H. Trevanion, who appeared for the prosecution, said these proceedings were taken by the Royal College of Veterinary Surgeons, under section 17 of the Veterinary Surgeons Act, 1881, under which it was contended the defendant had rendered himself liable to a fine not exceeding £20. In this case, said Mr. Trevanion, defendant lived at a house called The Rookery, at Kinson, Dorset, and described himself on his billheads as the proprietor of an ointment for horses and cattle. If he had confined himself to that it would not have mattered, but, in addition to that, he had notice forms or boards attached to trees on which were the words "C. Wrigley, late sergeant vet., R.A.V.C." He (Mr. Trevanion) did not know if there was such a qualification in the Army as "sergeant-vet." There was a sergeant farrier in the Army, but defendant had used the word "vet.," which might be taken as holding out that he was a qualified veterinary surgeon, and it was in respect of the use of that word that these proceedings had been taken. He (Mr. Trevanion) had a letter which defendant had written to the College of Surgeons, saying that if the words "late sergeant-vet." were what was complained of he would take them down, if the summons could be withdrawn. These proceedings, however, having been taken by the college, they had no right to withdraw the summons. They left it to the Bench to decide whether defendant had or had not exceeded his right in using the words complained of.

Mr. Danniells, of Hampstead House, Yelverton Road, Bournemouth, was then called to give evidence. He said he was formerly a sergeant in the Hants Constabulary, but was now a private inquiry officer residing in Bournemouth. Acting on instructions from Mr. Trevanion, he visited defendant's premises, called "The Rookery," at Kinson, on the 17th July. He saw there three notice boards. Two were on one tree facing the roadway, on which were the words: "C. Wrigley, late Sergt.-Vet., R.A.V.C." On another tree were the words: "Wrigley's Golden Ointment, cures horses' bad feet, sold in tins, 2s. per lb." He reported the result of his visit on the following day. The house was occupied by the defendant.

Mr. Trevanion produced a written apology to the Royal College of Veterinary Surgeons and a copy of the register showing defendant's name was not down in it as a proper qualified veterinary surgeon.

Defendant, giving evidence on his own behalf, said he was sergeant-vet. attached to a battery of artillery in the war. He was in France during the war.

The Chairman: Were you described as "Sergeant-Vet." in the orders?

Defendant: No, I was not; but I was known as "Sergeant-Vet."

The Chairman: Do your army papers show that?—No, sir.

To the Clerk, defendant said his official title in the army was "sergeant."

Defendant put in a paper showing he had been in the Royal Army Veterinary Corps as sergeant. He enlisted in December, 1914, and was discharged in 1919.

To the Clerk, defendant said he had nothing more to say, except that he had no intention to do the Royal Veterinary College any harm, or to mislead the public. He was prepared to take the boards down and would not put them up again; he only put on them what he thought he had been.

Asked by the Chairman what his work was in the army, defendant said he had full charge of the horses in the absence of the veterinary surgeon. He had got into the habit of being called "Sergt.-Vet.," and that was what he was known as in the army. He was in charge of the sick line in the absence of the veterinary officer.

To Mr. Trevanion, defendant said that before he joined the army he used to go out for his father who was used to horses. The superior officer of the Corps to which he (witness) was attached in the army was a qualified veterinary surgeon.

Mr. Trevanion asked defendant if he had had any practice in dealing with horses except what he got in the army, to which defendant said he could not say he had not. His father used to have a good deal to do with horses.

Mr. Trevanion: You were not wilfully holding out to the public that you were a qualified man? You say that if you have committed an offence you did it ignorantly?

Defendant: That is so. I would not have put the boards up if I had thought so. I had no intention to mislead the public.

The magistrates, having deliberated, the Chairman said the majority of the Bench thought the defendant did not intend to deceive the public. On that understanding they dismissed the case on payment of costs and the removing of the boards and an undertaking he would never put the boards up again.

Defendant expressed his willingness to promise that.

At Bridgwater County Police Court on August 22nd, Harry Potts, of Wembdon Road, Bridgwater, was charged with having on April 28th, not being on the register of the Royal College of Veterinary Surgeons, unlawfully used and taken the addition and description of "M.R.C.V.S." to his name, contrary to section 16 of the Veterinary Surgeons Act, 1881. Mr. C. P. Clarke, of Taunton, appeared to prosecute on behalf of the Royal College of Veterinary Surgeons, and defendant, who pleaded not guilty, was represented by Mr. Arthur King. The case for the prosecution was that Mr. Potts gave a certificate in respect of a mare which had met with an accident, and that this certificate bore his signature, with the letters "M.R.C.V.S." added. The evidence, however, showed that no one saw Mr. Potts sign the certificate. The Bench, having considered the point in private, ruled that there was no evidence to prove that the signature was that of Mr. Potts, but in order not to prejudice the case they decided to adjourn it until the next court, and give Mr. Clarke an opportunity of proving the signature.

The "Little-known" Act.

DOCKING PROSECUTION.

At the Weobley (Herefordshire) Police Court, James Parry Evans, farmer, and Herbert Hill, castrator, were summoned respectively for permitting and subjecting three horses to be docked without the application of a general or local anæsthetic.

P.C. Lewis, who made the inquiries, stated that Hill admitted not using an anæsthetic, but said he was not the only one practising throughout the country. Witness admitted that the animals looked none the worse for the operation.

Mr. W. P. Leerek, who defended, said the offence was not denied, but the circumstances were difficult. That was the first case brought before the Bench in that district under a little-known Act passed in August, 1919, with the result that a great many farmers were in total ignorance of its existence. For years it had been the custom for farmers to carry out similar operations, and many of them were perfectly qualified by experience to do so. The defendant, Hill, had been so employed for many years, and had always done his work humanely and expeditiously, and the farmers had every confidence in him. From the financial point of view the Act would be expensive to farmers.

A castrator charged about 2s. 6d. per animal, whereas a veterinary surgeon, who alone was able to obtain the necessary anæsthetics, would charge about 30s. for each operation. He agreed that the publicity which the case would receive in the Press would be of benefit to farmers locally, and warn them of the risk they ran by any contravention of the Act. In this case the animals were properly done with little or no pain, and he asked for a dismissal of the summonses.

Mr. Williams, chairman of the Leominster branch of the F.U., spoke on behalf of the defendant Hill, and said that of the hundreds of animals operated on by him there had not been a single fatality.

The Bench dismissed the case on the payment of costs, the Chairman remarking that the law had to be enforced, however unpleasant.—*Preston Guardian.*

Medical and Veterinary Collaboration.

(Reprinted from *The Field.*)

In the best interests of the public it has for some time past been seen to be very desirable to establish an *entente* between the medical and veterinary professions, and no one has worked harder or more successfully than Major Hobday to bring it about.

The veterinary profession is endeavouring to repay an old debt, not too often or graciously acknowledged, when

in its infancy in this country it was nursed by the medical until it was put upon its feet and able to run alone. The first professors at the Camden Town veterinary school, opened by a Frenchman (St. Bel), were medical men distinguished for their attainments in different branches of science and for their broadmindedness in bringing their knowledge to bear on the domesticated animals, and to instruct a class of students socially and educationally inferior to those of their own body. Generous assistance was forthcoming from a few of the great landed proprietors, and a permanent school was established.

It is to be feared that the proverbial ingratitude of youth for past favours must be accounted among the causes of the sister professions holding aloof from each other in subsequent years. This naturally led to ignorance of each other's work in the general welfare and conservation of the health and wealth of the nation, as the late Sir George Fleming was one of the first to point out. We have several times alluded to the valuable co-operation of learned societies representing the two professions or branches of medicine, and take the present opportunity of making a few quotations and comments on a paper Major Hobday was invited to read at the late meeting of the British Medical Association, which was followed by a discussion on "Animal and Vegetable Pathology in Relation to Human Diseases." "Members of the medical and veterinary professions have much in common," Professor Hobday reminded the meeting, "and to collaborate more closely an interchange of ideas cannot help but be of mutual benefit not only to themselves, but to the world in general, as the day of the water-tight compartment system of opposing the ravages of disease is past, and by progressing hand in hand much interlocking of ideas and side-tracking can be avoided, and a more rapid advance gained against the common foe."

The diseases communicable from animals to man and from man to beast are many, and recent research has added to the number previously recognised. Among the indisputably communicable may be mentioned glanders, rabies, anthrax, tuberculosis, foot and mouth disease, cowpox, mange of all animals (horse, ox, dog and cat), ringworm, especially of the horse, calf, cat and mouse, and certain forms of seborrhoea (such as blacksmith's contract from handling greasy legs of horses). The abortion bacillus of Bang is also under suspicion as a source of contagion from cattle, and the essayist is of opinion that the great prevalence of pyorrhœa in pet dogs (which are kissed by their fair owners and allowed to lick their lips and hands) should be regarded as a possible factor in the spread of that disease in human beings.

Others are produced by parasites requiring an animal host to make their respective life-cycles complete before they can become pathogenic to man, such, for example, being the Echinococcus, the Cysticercus bovis (the larval stage of the Tænia saginata of man), and Cysticercus cellulosæ (the larval stage of Tænia solium), the parasites of measly beef and measly pork respectively, and the Trichina spiralis of the muscles of the pig, which gives rise to trichinosis in man in countries where ham is largely eaten smoked and not necessarily cooked.

No better illustration of the need of studying comparative pathology could have been selected by Major Hobday than that of the "gin liver" which in man has been attributed almost entirely to alcoholic indulgence. This condition of cirrhosis is not at all rare among animals whose total abstinence from alcohol is beyond question. Then there must be a common cause, and it should be sought both by the human and animal pathologist if, indeed, such a distinction as the latter is permissible. We would rather say that the clinicians and the research workers in both branches should be constantly comparing notes and providing one another with material. Major Hobday, speaking of this disease, says that "cirrhosis of the liver is one of the commonest things observed when making *post-mortem* examinations of old animals."

This reference to *post-mortems* of animals reminds us of one of the compensations of the animal doctor for the inability of his patients to speak of their sufferings and locate the pain, for only in the case of some pets is the veterinarian denied the opportunity of confirming or upsetting his diagnosis by an examination after death.

The student of disease problems desires to know why some species of animals are immune or refractory to certain diseases. Why, for instance, should the ox be immune to glanders while the horse, ass, mule, some carnivora and man fall easy victims to it? "There must be a valid reason," says the Professor, "and if only that knowledge could be attained and put into practical shape for purposes of conferring immunity on those susceptible, the fight against glanders would have scored a point—a great point, too—on the side of progress. Then, again, one must not forget the danger of the animal as a carrier of disease, so that to the scientific worker a knowledge of the habits of the animal is as useful and necessary as a knowledge of the symptoms when in a state of disease."

The importance of collaboration between the two professions will have perhaps been sufficiently emphasised above, but the essayist completed it by a quotation from the *Soviet Red Gazette* as follows: ". . . . . for humanitarian and sanitary reasons have shot 117 children affected with glanders which developed after eating the flesh of horses suffering from that complaint (glanders)."

Commenting on the above brief and brutal report, Major Hobday says: "It makes one meditate, safe within this England of ours, what can occur when the laws of preventive comparative medicine are disregarded, and it is a striking instance of the value of the trained veterinarian to his medical *confrère* and the general public."

Glanders and rabies, two of the most horrible diseases which can affect man or beast, show what can be done by organised collaboration of the two professions. Each primarily is a disease of animals, and only comes to man from them.

Let the veterinary scientist eradicate glanders from his patients of the horse tribe, and rabies from the canine race, and neither of these diseases will appear in man. The essayist further expresses a "reasonable hope that by the end of this year this will have been achieved in regard to Great Britain."

We may not all share the Professor's optimism of eliminating the dire diseases referred to in so short a time. We had almost attained those happy conditions prior to the War, but some world-disturbance has always occurred, and some subtle law come into operation whereby a species

is preserved, whether it is of macroscopic or microscopic proportions such as the specific bacilli of glanders.

Space forbids us to follow the paper in detail, and there will be many inside and outside of the two professions chiefly concerned who will read with the greatest interest the methods already adopted in testing for glanders and tuberculosis and the preventive measures which have been attended with such great success during and since the Great War, in which the writer of the essay distinguished himself in the field as in the laboratory, and in more than one theatre of military operations.

A New Method for Detecting the Eggs of Parasites in Fæces.

By THEODOR VAJDA, Professor of Pharmacology, Veterinary School, Budapest.

(Reprinted from the *Journal Amer. Vet. Med. Assn.*)

In over a year I have made well over 1,000 fæcal examinations and found that in the fæces of domestic animals *Coccidium*, *Ascaris*, *Strongylus*, *Oxyuris*, *Dochmius*, *Œsophagostomum*, *Trichuris* and *Dipylidium caninum* eggs can be detected easily and in great amount by the following method :—

Dilute the fæces with water and mix well with glycerine (sp. gr. 12·5) in a short test tube with a large opening or in a conical medicine bottle of 10 to 25 grammes capacity. This mixture should be left standing for one-half to one hour, or centrifugalised and examined after being left standing for a certain time. The quantity of water to be mixed with the fæces depends on their origin and constituency. A given amount of horse or hog fæces of normal constituency should be mixed with twice this amount of water ; a given amount of sheep, goat or dog fæces with three times this amount of water. For soft fæces the amount of water should be diminished, and in cases of diarrhœa the fæces must be examined without the addition of water.

I have found that there is a difference in the specific gravity of the eggs of the different parasites, therefore I have had to vary the quantity of glycerin according to the species of parasites involved. To isolate the maximum number of eggs I use one part of glycerin to get *Strongylus*, *Oxyuris*, *Dochmius* and *Œsophagostomum* eggs, and this amount also served in the case of *Coccidium*, 1½ parts for *Ascaris megalocephala* and 3 parts for *A. marginata*, *A. lumbricoides* and *Trichuris*. If more than the amount of glycerin stated here is used, the amount of eggs recovered is not materially diminished, but if less is used some eggs, for instance, those of ascarids, cannot be detected at all.

From the surface of the fæces prepared with glycerin, or from the liquid strained through linen, eggs can be detected after a few minutes. Their number increases considerably after standing ½ to 1 hour. If the preparation is centrifugalised at moderate speed for 15 to 20 minutes and allowed to stand a few minutes, one can obtain a great number of eggs by carefully removing them from the surface with a glass rod. I found it very important to take great care in touching the surface of the centrifugalised fæces-water mixture with a dry, clean glass rod, because if this rod is dipped into the liquid, many fewer eggs are recovered. The same is true if a pipette is used.

Thousands of *Ascaris* eggs can be recovered when present if we mix and stir well a large quantity of horse or hog fæces with double this amount of water and strain it through gauze, wringing the four corners of the gauze together and pressing out the liquid. After centrifugalising at moderate speed for 30 minutes, the liquid on top of the sediment can be poured out (keep about 1 to 2 c.c), as it does not contain any eggs. The sediment should be mixed carefully with 1½ parts of glycerin for horse fæces and 3 parts for hog fæces by means of a glass rod, again centrifugalised for 15 to 20 minutes and left to settle for a short time. The milky white surface of the liquid, which is light brown, will contain a great amount of eggs if many ascarid eggs are present in the fæces examined.

The eggs remain a long time unchanged on the surface of the fæces thus prepared with glycerin, and the embryos in the eggs develop to a certain degree. In the eggs of *Ascaris marginata* moving embryos can be detected as early as the sixth day, and they are still motile after a month, because the glycerin does not penetrate into the inner part of the eggs. After standing 3 months a great number of deformed *Strongylus* eggs with granular protoplasm and even a greater number of *Ascaris megalocephala* eggs containing nearly unchanged and well-developed embryos were found.

All the eggs can be removed from the surface of the liquid by the following method : Fasten filter paper by means of a string at the mouth of a test tube and dip it into the large centrifugal tube which contains the fæces-glycerin mixture, until the whole surface of the filter paper touches the surface of the liquid. The filter paper must be dried afterwards. *Ascaris* eggs can be taken for examination from such filter papers, kept in a well-closed glass, and after 8 months are easily discernible if kept for a short time in water containing glycerin. This method can be put into practice in cases where animals are suspected of having ascarids and there is no opportunity to make a microscopic examination on the spot. Instead of sending the fæces, which will rapidly decompose, to the laboratory, we send the filter paper treated as noted above.

Fluke eggs cannot be isolated by this method. They are deformed and break up after a few minutes' exposure to the glycerin. I could not increase the resistance of the fluke eggs to the action of glycerin either by treating them with formalin or by boiling them. It would be very interesting to determine by experimentation whether the necessary amount of glycerin introduced into the alimentary canal has the same effect on the fluke eggs or not.

The advantages of the above-described method are the following :—

1. A great number of eggs can be isolated even from a very small quantity of fæces (½ gramme). We counted 1,358 *Ascaris lumbricoides* eggs in one preparation and 1,130 in another.

2. The eggs become more transparent and their structure is more readily visible.

3. They keep their original form for a long period.

4. The liquid separated from the surface of the glycerin-fæces mixture can be examined under the microscope without using a cover-glass and can be kept for several days without desiccating.

The Veterinary Record.

2nd September, 1922.

Abstracts and Reviews.

The Art of Horse Shoeing.

Major Mattinson is to be congratulated upon the very able way in which he has revised and enlarged the third edition of Hunting's work. The present book is well bound and excellently printed, and consists of 16 chapters, 223 pages, and 169 figures. Among the most important additions are the chapters dealing with "Frog pressure and development," "Military Shoeing," and "Interference and injuries caused by the Shoe." Each of these is a valuable addition to what has always been regarded by the profession as a standard work. Apart from these new chapters, many of the existing ones have been enlarged, and the following subjects have been discussed in greater detail, viz., selection of shoes, injuries from shoeing, the form and action of the foot, the preparation of the foot, shoeing of bad feet, and the use and abuse of leather and rubber pads. All these are worthy of special note. The question of surgical shoeing might, with advantage, have received a little more attention; no recommendations are made for such conditions as ringbone, sidebone, etc. Methods of restraint used for shoeing vicious horses have also been omitted; a chapter on this subject would be a valuable addition to what must be considered an admirable work.

[*The Art of Horse Shoeing*, by WILLIAM HUNTING, F.R.C.V.S. Fourth edition, revised and edited by A. B. MATTINSON, O.B.E., M.C., F.R.C.V.S., D.V.S.M., Major R.A.V.C. Militia; late Commandant Army School of Farriery; examiner in Stable Management and Shoeing, R.C.V.S. Publishers: Ballière, Tindall and Cox, 8 Henrietta Street, W.C.2. Price 10/6 net.]

Prevention of Ox Warble Infestation of Cattle.

Previous experiments in dipping and spraying cattle, with the object of destroying the larvæ of *Hypoderma bovis* and *H. lineatum* after they had established themselves in the host, proved unsuccessful. The present ones were undertaken with the object of testing the value of insecticidal treatment in preventing oviposition or the destruction of the larvæ before they enter the skin of the host. Very few larvæ were found in the winter on cattle that had had their legs protected below the knees and hocks during the preceding fly season. Of the substances tested, a two per cent. solution of coal-tar creosote dip proved the most effective. The results obtained with a wading tank indicate that this method may prove of great practical value, and should further trials confirm its efficacy, it could probably be adapted to meet the requirements in treating range cattle.

[IMES (M). and SCHNEIDER (F. L.). Experimental Treatment of Cattle to prevent Ox Warble Infestation.—*Jl. Amer. Vet. Med. Association, Washington, D.C.*, lix, N.S. x, no. 6, September, 1921, pp. 722-727. Ex. *Review of Applied Entomology.*]

Insect Transformation.

In this book the subject of metamorphosis among insects is expounded in a manner that may prove of service to the student and to the general reader. The descriptions of outward and inward growth and change are fully illustrated by selected drawings.

The chapter of the greatest interest from the economic standpoint is that headed "Growing Insects and their Surroundings." This is a study of the relation of environment to insect transformation, and the numerous insects that are selected as illustrations are almost all of economic interest. The artificial control of such insects as mosquitoes, house-flies, sheep-maggot flies, ox warble-flies, and in fact, to a greater or less degree, all insects of medical or veterinary importance, largely consists in altering the environment so as to render it unsuitable for them; and the general survey here provided is likely to prove very helpful in this connection.

[CARPENTER (G. H.). Insect Transformation.—*London*, Methuen and Co., Ltd., 1921, x+282 pp., 4 plates, 124 figs. Price 12s. 6d. net. Ex. Ibid.]

Proper Care of Milking Machines to Produce Low Bacterial Count Milk.

Bacteriological investigations on milking machines have been concluded by HART and STABLER.* This work was carried on with the object of ascertaining the value of heat sterilization in a wtaer bath for all parts of milking machines in lieu of the widely-used and unsatisfactory disinfectant solutions. It was found to be an entirely practical means of producing low bacterial count milk with milking machines, and with this technique milk of the best grades can be produced with them. The experiments were carried on under practical conditions in a certified dairy with 10,000 bacteria per c.c. the maximum limit, a guaranteed dairy with 25,000 bacteria per c.c. the maximum, and a dairy shipping to a Grade A pasteurised supply where a maximum of 200,000 bacteria per c.c. was allowed before pasteurisation. A temperature of 180° F. was found to be efficacious and prolonged the life of the rubber parts over that obtained when they were regularly subjected to 212° F.

[*University of California, College of Agriculture, Annual Report of Director for* 1919-20.]

Tuberculosis in Animals.

Through the results of many studies on tuberculosis in cattle and hogs, information of practical value to veterinarians and stock owners has been obtained, and in some instances discoveries have been made which are having a world-wide effect on methods used to control animal tuberculosis. One of them is the improvement at this Station of the *intradermal test* which was first used in California by A. R. WARD in 1910, at which time he was veterinarian of this Station. In 1913 HARING and BELL thoroughly tried out the method and improved the technique. The results, published as Bulletin 243, attracted the interest of veterinarians throughout the country and greatly stimulated the use of the test by practitioners. Soon after the publication of Bulletin 243, the State Veterinarian of California recognised the test officially as being as acceptable as the subcutaneous method. Most of the other states and the U.S. Department of Agriculture were slow in accepting the method, but recently the official use of the test has become general.

[*University of California, College of Agriculture, Annual Report of Director for* 1919-20.]

* *Journal of Dairy Science*, vol. 3, No. 1, January, 1920.

Botulinus Antitoxin.

In an effort to mitigate the losses from forage poisoning in horses, the production of A and B types of botulinus antitoxin was started in April, 1919, by HART and HAYES. One horse was immunised against each strain of the toxin, and, by October, the horses were bled for the first time and a supply of both types of antitoxin secured.

Since this time considerable experimentation has been carried on with the toxin and antitoxin in experimental animals and in some natural outbreaks of forage poisoning in horses and limberneck in chickens. The antitoxin has also been administered in three human cases of botulism, without beneficial results. From this work it has been found that the antitoxin has marked preventive value against its particular strain of toxin. Its therapeutic value, however, is apparently not very great, probably because of the fact that the botulinus toxin early becomes fixed in the tissues. Its action is, therefore, comparable to tetanus antitoxin in cases of tetanus rather than to that of diphtheria antitoxin in cases of diphtheria.

[*University of California, College of Agriculture, Annual Report of Director* for 1919-20.]

A Universal Blood-Sucker.

Lyperosia irritans, L., unlike *Stomoxys calcitrans*, is never found in large numbers in stables. It is most abundant in the open, and has apparently no preference for light or shade. It is a blood-sucker, and although found on horses and dogs, it apparently chiefly attacks cattle; on one animal as many as 1,000 individuals may be seen at once. This fly is most abundant during June, but has not been seen after August. About 15 to 23 eggs are laid by each female. These hatch in from 2 to 3 days, pupation occurring about 7 days later and lasting at least 8 days. The shortest period noticed, during fairly warm weather, from egg to adult was 17 days, but under cooler conditions it may require 30 days or more. Although eggs were found in cattle dung, and this was used for breeding purposes under laboratory conditions, it is not apparently the chief site for larval development, as no pupæ were ever found in manure heaps in the field. The natural enemies of this fly are probably the same as those attacking *Stomoxys calcitrans*. During the present observations a mite, apparently distinct from *Holotaspis* sp. attacking *S. calcitrans*, was found on the adults, and the larvæ were attacked by larvæ of an Anthomyiid fly, *Hydrotæ dentipes*.

[WILHELMI (J). *Zur Biologie der kleinen Stechfliege, Lyperosia irritans, L.* (Biology of *L. irritans*.)—*Sitzungsber. Ges. Naturf. Freunde, Berlin*, October-December, 1917, No. 8-10, pp. 510-516.]

Liquefied Phenol in Liquid Paraffin a Dangerous Substitute for Phenol in Glycerine.

The author draws attention to the dangers of liquid paraffin as a vehicle for phenol. A young physician prescribed as eardrops for a boy of ten suffering from earache liquid phenol in liquid paraffin. The phenol in this case, says the author, is precipitated. A glass dropper was used to administer the drops; the pure phenol collects for a moment in the tip of the dropper and is injected at first alone. The results in the child's ear were described as terrible. Half of the tympanic membrane was destroyed, and the external meatus and the auricula were badly corroded.—*Boeminghaus* (*Exper. Cancer.*, December 8th, 1921, through *Journ. Amer. Med. Assoc.*, February 25th, 1922, 622).

Influence of Colloids on the Action of Non-Colloidal Drugs.

It has been shown that rabbit serum contains substances which have the property of inhibiting the action of atropine and pilocarpine, and it has been found that the fixing power of serum for pilocarpine can be inhibited by the action of chloroform, and more especially ether. Other substances, such as peptone, have a similar effect. These observations, it is stated, fit in with the fact noted by Dale that histamine is ten times more poisonous for the cat when it is narcotised. This is regarded as an action of the narcotic in shifting the colloidal qualities of the serum in a direction in which the colloids have less capacity for fixing a poison. If this is so, a large field is opened up in the study of shock in the anæsthetised subject.—W. S. VAN LEEUWEN AND A. VON SZENT-GYORGYI (*Journ. Pharmacol. and Exper. Therap.*, 1921, 18, 271, through *Med. Sci. Abs. and Rev.*, April, 1922, 73).

Alcohol and Surface Tension of Disinfectants.

The author agrees with the assertion made by many authorities that the addition of 70 per cent. of ethyl alcohol, or of 35 per cent. propyl alcohol, modifies the surface tension of disinfectants and renders them much more penetrating and bactericidal. The formula found most effectual has been 70 per cent. ethyl alcohol containing 1 or 0·5 per cent. acetic acid.—O. CIGROZZI (*Polichinico*, Rome, January 9th, 1922, through *Journ. Amer. Med. Assoc.*, March 11th, 1922, 766).

Action of Quinine and Methylene Blue on the Healing of Wounds.

In a paper on "Photodynamic Substances for Wounds," the author has found that quinine and methylene bloe are the most active of the chemicals that have a phot-u dynamic action. By this term is meant the activation of their properties by light. They have no toxic action in the dark, but become toxic for infusoria, etc., after exposure to light. The author's tests were made on guinea-pigs given a daily injection of 1 c.c. of a 1: 1000 solution of quinine or of a 1: 100,000 solution of methylene blue, after a superficial lesion had been induced. The difference in the percentage of area healed over by the eighth and the twelfth days was striking in the animals kept in diffuse daylight or in the dark thereafter. Quinine seemed to be the more potent, especially at the concentration referred to; stronger solutions were less effectual.

(L. Torraca *Policlinico*, Rome, February, 1922; through *Journ. Amer. Med. Assoc.*, May 13th, 1922, 1498).

New Sources of Cantharidin.

Cantharidin, which, according to the pharmacopœias, may be obtained from various species of Cantharis or Mylabris, has now been isolated from two other species of beetles indigenous to Java. *Hora debyi Fairm.* (=*Cissites testaceus auct.*) ranges in length from 16 to 30 mm., and in breadth from 5 to 10 mm., and is of a brick-red colour. The other species, *Cissites maxillosa*, is much greater in size, but of the same colour. Cantharidin may be separated from the male or female, or from the eggs, by moistening the finely-divided material with strong hydrochloric acid, followed by sublimation, and evaporation of any condensed acid by exposing the sublimate over unslaked lime. In addition to their vesicating property, m.pt. and polarising action upon light, the crystals may be identified by their behaviour with baryta water.

(C. van Zijp, *Pharm. Weekly*, 1922, 59, 285, through *Analyist*, May, 1922, 214).

EXCRETION OF POTASSIUM IODIDE IN THE URINE IN HEALTH AND DISEASE.

The use of this method as a test of renal function has been reinvestigated by the author. Two grammes of potassium iodide were given, and the iodine excretion estimated in the two succeeding twelve-hour periods. In four normal subjects, the excretion during the first twelve hours varied from 44 to 60 per cent. of the dose. The author regards an excretion below 35 per cent. as a definite indication of impaired function, and a reduction to 15 per cent. as a sign of very advanced disease. G. C. Linder (*Quart. Journ. Med.*, 1922, 59, 227, through *Med. Sci. Abs. and Rev.*, August, 1922, 431, and *Pharm. Journal*).

INFLUENCE OF PURGATIVES ON BLOOD CONCENTRATION.

A distinct concentration of the blood is produced in dogs by saline purgatives, and the maximum effect is reached during the second hour. Although diarrhœa occurs during the fourth and sixth hours by the use of vegetable purgatives (castor oil, cascara), no change in the hæmoglobin content occurs. It is stated that in pathological cases where the blood is known to be concentrated, harm may be done by the administration of saline purgatives. This may account for the collapse which is sometimes seen when these drugs are administered.—F. P. Underhill and L. Errico (*Journ. Pharmacol. and Exper. Therap.*, 1922, 19, 135, through *Med. Sci. Abs. and Rev.*, August, 1922, 426, and *Pharm. Journal*).

THE ANÆSTHETIC PROPERTIES OF PURE ETHER.

It has recently been maintained that pure ethyl ether is not an anæsthetic, and that the physiological action ordinarily attributed to this body is due to impurities contained in the commercial material. The authors prepared pure ether for their experiments by bringing sodium ethylate and ethyl iodide together in alcoholic solution, which they made sure was free from all impurities, and was suitable to decide the question at issue. The conclusions arrived at are that pure ether, made by a clean-cut chemical reaction which excludes almost completely any contamination with substances which have been claimed to be the real anæsthetic agents of ordinary ether, possesses in the highest degree the anæsthetic properties which have usually been attributed to it.—R. L. Stehle, M.A., Ph.D., and W. Bourne, M.D., C.M. (*Journ. Amer. Med. Assoc.*, July 29, 1922, 375, and *Pharm. Journal*).

Association Reports.

The Central Veterinary Society.

DISCUSSION ON ANÆSTHETISATION.

A General Meeting of the Society was held in the Meeting Hall of the Zoological Society, Regent's Park, London, by kind permission of the Council of the Society, on Thursday, July 6th. Mr. G. H. Livesey, President, was in the chair and the following Fellows signed the attendance book :—

Messrs. W. Perryman, F. G. Samson, H. J. Parkin, Cols. A. J. Williams, and H. S. Mosley, R. J. Foreman, J. Willett, S. H. Slocock, G. P. Wale, H. D. Jones, W. Reekie, F. W. Willett, J. Rowe; Major Generals Sir J. Moore and W. Dunlop Smith. Majors R. C. Tennant, P. Dayer Smith, P. J. Simpson and F. Hobday, Professors G. H. Wooldridge and B. Gorton. Veterinary Major G. Rees Mogg; Captains R. Bennett, R. Brydon, W. H. Kirk, W. S. Widden, J. McCunn, O. S. Broadhurst. Mr. F. H. Stainton and J. F. Macdonald, Hon. Sec.

Visitors :—Major H. J. Holness, Messrs. J. A. Griffiths, A. M. Wylie, and Major A. E. Roberts.

The minutes of the two last meetings were taken as read and confirmed.

A telegram was announced from Mr. J. C. Coleman, regretting his inability to be present, and a letter to the same effect from Mr. McIntosh who was unable to be present owing to illness.

The PRESIDENT said Mr. McIntosh had been very ill indeed and his wife and family had been passing through a most anxious and critical time. He proposed that a letter should be sent to Mr. McIntosh congratulating him on his recovery and expressing sympathy with the wife and family at the extremely anxious time they had been passing through.

The HONORARY SECRETARY seconded the motion, which was carried unanimously.

MORBID SPECIMENS.

Dr. N. S. LUCAS exhibited a series of pathological specimens and a special box used for anæsthetising animals. He said he was pleased to show the specimens, as he believed it was the first time that an attempt had been made to use any of the vast amount of material which came into the hands of the Society in the way of making what he hoped were permanent specimens, which could be used for the purpose of either demonstration, teaching or reference. Most of the preparations showed a certain amount of colour which he hoped would be permanent. The method was known as the Kaiserling method. The ordinary hæmoglobin was turned into acid hematin, which had the same colour as hæmoglobin but was permanent, and therefore, specimens which contained a good deal of blood, for instance, a pneumonic lung, showed up very much better than a specimen of a stomach, which was only a delicate pink when perfectly fresh. The actual process consisted of taking the substance as fresh and as clean as possible, so as to get the blood clot off the surface and put it into a solution of potassium acetate, potassium nitrate formalin and water. The essence of the process consisted in knowing how long to leave the specimen in the solution. The time varied enormously with the density of the substance, the kind of substance, and the size. He showed a skull with an enormous thyroid tumour, and said that that specimen had been left in for a fortnight or three weeks. A piece of intestine shown had been left in for 24 hours. When it was judged the specimen had been in the solution sufficiently long it was taken out and allowed to drip, and then put in spirit, when the colour came back. It was very important to get all the formalin out, because if that was not done the colour faded again. The specimen should be left in the spirit for 24 hours, if it was a large specimen and then put into the permanent solution, a half and half solution of glycerine and water and

given a change of that, and then a little thymol should be added as a preservative. Another way was to put the specimens in gelatine. Gelatine mixed with an equal quantity of glycerine and potassium acetate, and cleared with white of egg, was poured over the specimen in a fluid state and the top put on. It was very difficult to get it without bubbles, but a little practice would make it perfectly easy. The most difficult specimen to deal with was liver, because it was so dense. With regard to the specimens themselves, they were all labelled. The one which he had not labelled was an ulcer from a reindeer. The animal was a joint patient of Professor Wooldridge and himself. The animal was a newly imported one and would not take to the food that could be given it and melœna occurred, followed by pneumonia which they failed to cure. There was found in the rumen an ulcer which had very nearly perforated. There was another somewhat smaller. He also showed a specimen from a jungle cat which had been in the Garden for some time. Its illness was not reported, and it died. There was a spongy mass of necrotic tissue, and the bone was found to be very carious and rarified and also thickened, showing a great amount of disease. He found the fundus of the stomach in the condition shown, and cut a section of the ulcer and found that all the tissues were loaded with a Gram positive bacillus of varying length. He had not thought it would be possible to get a pure culture from the ulcers, but he believed if he had tried he would not have had the least difficulty. It was a great lesson, that unless a thing was in an absolute state of decomposition an attempt should always be made to try and get the organism which might have caused the condition. One success was really of very great value. The Lister Institute were extremely keen on getting comparative organisms, and if any of the Members happened to isolate an organism, Dr. Brooks of that Institute would be only too pleased to have it. He also showed a specimen of tubercular joints in a bird, the only specimen he said he had ever seen. The whole bird was riddled with tubercle. One thing rather remarkable was, that in the human being caseous masses were rarely found round the joints when the joint became infected. He thought tuberculous joint disease was very rare in birds.

Dr. Lucas also exhibited the anæsthetic apparatus used in the Garden, and demonstrated its use. A pipe was carried into a box which was made according to the size of the animal that had to be anæsthetised. The instrument had been used for a mandrill, two large dogs from Tibet, a hyena, two adjutant storks and a wolf. The longest case took exactly five minutes to get under. Ether was always used and was a considerable improvement on the chloroform method, as it used to be, because he remembered seeing two keepers pumping for half-an-hour until they had anæsthetised a leopard sufficiently for the purpose of cutting its claws, whereas by the use of the box and ether, the hyena was under in four-and-half minutes, the pumping being done by a lady anæsthetist. He had done the work in conjunction with Dr. Rood, anæsthetist to University College Hospital. It was Dr. Rood who was keen on using ether, and asked him to put in a word on behalf of ether against chloroform. It would not be unjustifiable to say that chloroform should never be used unless the circumstances were so special that it was necessary to do so. It was a dangerous drug. During the War he had administered a large number of anæsthetics, and had followed out the rule of never giving chloroform when he could give ether.

Mr. Gorton asked how much ether was used in anæsthetising a large animal like a wolf or a hyena.

Mr. Lucas said about half-a-pint. If one was anæsthetising a valuable dog, 10/- worth of ether was cheaper than a £25 dog.

Professor Wooldridge said he was very interested in hearing of the success that had been obtained from ether alone, but with a very wide experience of the use of ether with animals he considered that it would be found it was not nearly so useful for general purposes as chloroform. The danger which Dr. Lucas had mentioned was certainly one which must not be looked upon lightly, but it was not so great with an experienced anæsthetist who took care of his patient and observed him carefully during the period of anæsthetisation. During the past few years he had anæsthetised many thousands of domesticated animals, both carnivora and herbivora, with chloroform without the loss of a single patient, or at least without the loss of a patient which could be attributed directly to the chloroform. There were cases where a *post-mortem* examination had revealed gross lesions which had accounted for death. If every animal was treated as though it had such lesions, then the question of anæsthesia would be out of court. The enormous amount of ether that was required, and the considerable time taken to put the animal under it, put ether out of the question. It was not possible to put all patients in boxes. It was quite another matter in the case of menagerie animals that could not be handled in any other way, but the mortality in the box was bound to be higher than in the case of patients which could be handled more easily. He should be very interested to see the further developments of the method for the particular animals Dr. Lucas had referred to. He did not know whether Dr. Lucas could give an estimate of the amount of ether he would require to anæsthetise a zebra by his method.

Dr. Lucas thought that a pint would be ample for a zebra. He still maintained his view that ether was a safe anæsthetic. He had seen a bear die under chloroform and it was that which decided him to use ether. An important point was that there had not been a case of pulmonary trouble.

Professor Wooldridge said in any case a zebra could be got under for surgical anæsthesia

on one ounce of chloroform, and the anæsthesia was hardly likely to be so intense under ether in a severe operation. He himself had been concerned in the case of the bear, and he thought in that instance the death was not due to chloroform, but, was because the animal, as it was being withdrawn from the box, showed signs of returning consciousness and a cord muzzle was put round his nose and pulled very tightly and, in his opinion, the animal was asphxiated by the muzzle. No one engaged in veterinary anæsthetics doubted the safety of ether, it was the practical application that was questionable. The pump and bottle used by Dr. Lucas were identical with those used at least 30 years ago by Wallis Hoare for ether and for chloroform. The only difference he could see was in the large bore of the tubing. He would be interested to observe the further use of ether in the case of the larger animals.

MR. FOREMAN asked whether, in giving these large quantities of ether, there wete any after effects such as nausea. He also wished to know whether something in the way of Dr. Waller's chloroform mask could be adapted. It was very successful with human beings, many thousands of cases having been treated with very small doses of chloroform.

DR. LUCAS said no after effects had been observed at all. The animals were drowsy for a little while and then became perfectly normal. In the administration of ether by vapour, as opposed to pouring it on, there was very seldom any salivation. Only in one case, that of a Tibet mastiff, was there any salivation at all, and it was not intense in the dog. It would appear that the lack of salivation was due to the vapour only being used, because in a mongoose, to which he gave ether with a mask straight off, there was copious salivation. It was the swallowing of the saliva with a certain amount of ether dissolved in it that produced nausea.

PROFESSOR WOOLDRIDGE asked whether originality was claimed for the particular apparatus, or the application of the ether to the box.

DR. LUCAS said there was no originality claimed for any of it. It was just a matter of using ether instead of chloroform, which they thought was a step in the right direction, and also using a heavy saturation of ether.

MR. WIDDEN said he always used a glass covered box, 15 inches long, a foot high, and 8 inches wide for small dogs and cats, and he was using it every day. He used half an ounce of chloroform on a piece of cotton wool, and he found the average time taken for the complete anæsthesia was three minutes. He had never had any deaths.

MR. MALE asked how long the animal was under the anæsthetic, and what happened when it came round.

DR. LUCAS said it was possible to continue the anæsthetic with a mask in the ordinary way.

MR. MALE said he had never had any deaths with the chloroform method.

DR. LUCAS said that he had noticed that chloroform anæsthesia required long and hard work, even to obtain the sufficient depth of anæsthesia required for claw cutting.

MAJOR-GENERAL SIR J. MOORE said that in the Army during the War many thousands of animals were chloroformed, and he did not remember a single death. In the very early days of the administration of chloroform in veterinary practice, he was associated with the real father of chloroform in the veterinary profession, Mr. Richard Roberts, of Tunbridge Wells, who was practising in Kendal in the 70's and early 80's. In those days he used to castrate colts in the open, and the difficulty was to get them quickly under chloroform. They were taken into a grass field and the apparatus put on, with ropes on the headstall. The nosebag being used was an ordinary one. Chloroform at first was given, mixed with a lot of air. Mr. Roberts then proceeded to block up the space between the top of the muzzle and the head to exclude as much air as possible, and in that way could get animals under the influence of chloroform very quickly. The patients were chloroformed, operated on, and up again within ten minutes, with an expenditure of 2 to 2½ ounces of chloroform. There were never any ill results. He remembered, while he was with Mr. Roberts, two ladies leaving in their wills instructions that their animals should be destroyed by chloroform, and in both cases he had to chloroform the animals for a very long time, and eventually sent for a shot gun to destroy them. On another occasion, he tried to kill a horse by means of chloroform. He stayed with the animal in a loose box over an hour, and it was not dead at the end of that time. It was very difficult indeed to kill a large animal by chloroform. He himself had had chloroform for operations, and had been under the influence of anæsthetics six times, twice chloroform and four times A.C.E. mixture,without any ill effects except that the ether of the A.C.E. left a nasty taste in the mouth for two days. On one occasion he took notes of the personal effect upon him of chloroform, and he found the line of demarcation between sensibility and insensibility was most acute. There was no gradual going off. He found that, occasionally, chloroform produced a certain amount of sickness afterwards.

THE PRESIDENT, in thanking Dr. Lucas for showing the specimens and the ether apparatus, said he had anæsthetised a very large number of small animals during the last twenty years, and he had given up ether, particularly in the case of cats. He had used the mask method, either a face mask or a jar, and did not put animals in a chamber. His objections had been two: the great period of excitement and the excessive salivation. That was more marked and more dangerous in cats than in dogs. If a cat's mouth and throat became obstructed with a large flow of saliva, the animal had a very awkward way of choking or of stopping breathing and it was difficult to get it to start to

breathe again. He had never tried on an extensive scale to put animals into boxes, as he had always found the mask method eminently satisfactory in private practice. Of the anæsthetics he had used he had certainly found A.C.E. mixture in young dogs, and in dogs where one was not quite certain of the condition of the heart or lung, to be of value, but in all other cases he had found chloroform safe, handy and absolutely reliable, and he believed that had been the experience of most others who had canine and feline work to do.

The following were nominated for Fellowship of the Society :—

Mr. A. M. Wylie, M.R.C.V.S., proposed by Major Hobday, seconded by Mr. F. H. Stainton

Major H. J. Holness, D.S.O., R.A.V.C., proposed by Hon. Sec., seconded by Major Hobday.

The following were balloted for and unanimously elected fellows of the Society :—

Mr. G. Elmes, F.R.C.V.S., St. Albans, and Mr. H. C. Talbott, M.R.C.V.S., Surbiton.

Dr. C. F. Sonntag then read his paper on "Notes on Anatomical and Physiological Variations in Animals due to Climatic Conditions." (Not available for publication at present).

Sir J. Moore, Major Hobday, and the President took part in the discussion.

On the Agenda was a paper by Professor G. H. Wooldridge on "The Anaethetisation of some Zoological Patients."

The President thought, having regard to the fact that many of the Fellows had to leave early, justice could hardly be done to Professor Wooldridge's paper by taking it that evening, and, therefore, he suggested, if Professor Wooldridge would agree, that the paper might be deferred to some future meeting.

Professor Wooldridge agreed and that course was adopted.

Mr. F. W. Willett said the Society was greatly indebted to the Chief Official of the Zoological Society, Dr. Chalmers Mitchell, for allowing it to meet in its Hall, and he, therefore, had great pleasure in proposing a hearty vote of thanks to Dr. Chalmers Mitchell for the courtesy extended to the Society by the Zoological Society.

Mr. Male, in seconding, said it was a very great honour for the Central Veterinary Society to be invited to meet in the Hall of the Zoological Society and the Fellows appreciated it very much.

The motion was carried unanimously.

Sir J. Moore, in proposing a vote of thanks to Dr. Sonntag and Dr. Lucas for their contributions, said the Fellows all agreed that both communications had been most interesting, and they were deeply indebted to the authors for what they had contributed. The apparatus shown by Dr. Lucas was a most admirable one for animals that were were difficult to handle. The specimens shown would bear a great deal of examining.

Colonel Moseley seconded the motion, which was carried with acclamation.

Dr. Sonntag, in reply, said it had been a pleasure to show the Fellows the work they had been doing and to bring the latest researches to their notice.

Dr. Lucas also replied. He said he had not quite realised when he introduced the apparatus, what a very thorny path he was entering upon, but he was very pleased he did so because, whatever the Fellows might have said, he knew that he was right! (Laughter).

The Fellows of the Society then visited the Prosectorium and Sanatorium attached to the Gardens, after which a very interesting round of the reptile house was made under the direction o Professor G. H. Wooldridge, who explained the many peculiarities of the animals housed there.

Derbyshire Veterinary Association.

A meeting of the Derbyshire Veterinary Association was held in the Royal Hotel, Derby, on Tuesday, July 11th, 1922. Mr. J. C. Heather presided, and there were also present Messrs. Howe, T. H. S. Duckworth, J. De Ville, Major T. P. Bagshaw, A. Levie, H. Briggs, H. McIntyre, H. King, G. S. Furniss, H. Fairer, J. C. Heather and E. Marrison (hon sec.).

Arising out of the minutes, Mr. McIntyre submitted that a resolution deciding that members should not act in an honorary capacity at shows was not in order, as notice of motion had not been given to conform with rule 15.

Mr. Levie suggested that the best thing to be done was to give notice at that meeting and vote on the matter at the next meeting.

Mr. De Ville said he had no objection to that course, but he warned members that they ran a big risk of splitting small societies on the matter.

Mr. Duckworth said he understood that the Derbyshire Show Committee had blankly refused to elect a man who was a member of the Derbyshire Veterinary Association.

Eventually, on the proposition of Mr. McIntyre, seconded by Mr. Duckworth, the minute was rescinded, and ordered to be included on the agenda for the next meeting.

It was reported by Mr. De Ville that he had met the member against whom there was a complaint for employing an unqualified man for castrations and docking, and the member said that for one season during the war he did employ a man, but had since done the work himself.

It was suggested that the Secretary write a friendly letter to the member asking him formally to write giving those facts to the Association.

The Secretary read a letter from Mr. Briggs enclosing a typewritten business card on which was "P. H. Hodgkinson, M.I.T.C.V.E., trainer, breaker, veterinary, East Kirby."

Mr. Briggs said he did not know if the man had practised as a veterinary surgeon, but he had

bought a lot of standard medicines. He was a dairyman.

Mr. DUCKWORTH pointed out that if they could prove the man had done any docking or operations they could get at him through the R.S.P.C.A. He did not think the Royal College would act on the card alone.

Mr. LEVIE expressed the opinion that a chemist could call himself a "Veterinary Chemist" without infringing the law; this man did not advertise that he was a "Veterinary Chemist."

The SECRETARY undertook to forward the card to the College with a query as to the use by people outside the profession of the word "Veterinary," and to report to the next meeting.

Mr. LEVIE then read a paper on "Sewage Poisoning in Cattle."

[Mr. LEVIE'S paper, together with the ensuing discussion, has received separate publication—*Ed.*]

Two specimens which were placed before members for examination were a cyst, about the size of a cricket ball, which came away with the placenta of a mare, and the fractured rib of a foal, the injury occurring during the act of parturition though it was a normal presentation. As the foal was coming away the attendants distinctly heard a crack. The foal lived three days but was never able to stand.

Major BAGSHAW promised a paper for the next meeting, and Mr. BRIGGS one for the later meeting.

On the motion of Mr. DUCKWORTH, seconded by Mr. DE VILLE, a vote of thanks was accorded the President and Mr. Levie.

E. MARRISON, *Hon. Sec.*

Notes and News.

The Editor will be glad to receive items of professional interest in these columns.

Foot-and-Mouth Disease.

OUTBREAK IN MANCHESTER.

The Ministry of Agriculture and Fisheries announce that the existence of foot-and-mouth disease has been confirmed at Water Street Pig Market, Manchester, several pigs being affected.

The usual Order imposing restrictions on the movement of animals into, out of, or within an area of approximately fifteen miles' radius of the infected premises has been issued by the Ministry of Agriculture and takes immediate effect.

Before this new outbreak no case of the disease had occurred in any part of Great Britain since June 30th last.

STARTLING STORY FROM AUSTRIA.

Foot-and-mouth disease has long been rampant all over Austria. You see cattle in all sorts of horrible states staggering down to the butchers. The weak Government exercises no control; indeed, the local authorities either include the butcher or fear him. If they vote for bad meat, he will vote for bad bread or sanded sugar and adulterated wine. Human beings are catching the complaint in appalling numbers. Their symptoms are the same as those of the animals—streaming eyes and nostrils. Then great sores appear on the lips, just like some big insect boring a deep hole, and scars remain for life. Prudent people have given up eating beef altogether, and an edict has gone forth forbidding them to walk in the woods near the Lake of Constance lest they should be infected.—*Herbert Vivian in Truth.*

CONGRATULATION REPLACES CRITICISM.

"When the outbreak of foot-and-mouth disease was at its height in January of this year," says the *Agricultural Gazette*, "we were compelled to criticise the Veterinary Department of the Ministry. which was also subjected to a great deal of strong criticism at meetings of farmers all over the country. Bearing in mind the terrible hold which the disease got upon the country during February and March, and also the length of time which it took to quell outbreaks in years gone by, it is only fair that we should congratulate the Ministry on the able and successful way in which it dealt with the disease. There has been no fresh case since June 30th, and it is thought in official circles that the last has been heard of the outbreak. Breed societies, branches of the N.F.Y., and other bodies formed for the expression of farming opinion, might very well put on record their appreciation of the way in which the Veterinary Department eradicated the disease, which still continues to play havoc with the flocks and herds on the Continent. A ready recognition where it is well deserved is not only bare justice, but adds to the impressiveness of criticism when criticism is necessary. We never know when we may experience another visitation; but we believe that the Ministry is fully alive to the possibilities of a fresh outbreak, and has taken all the necessary steps to deal promptly with any future cases."

EXPERIMENTS ON LIVE ANIMALS.

During 1921 to total number of experiments on living animals amounted to 75,262, an increase of 4895 over the total for the previous year. Of this number 8165 were performed with anæsthetics. In the course of cancer investigations 7359 experiments were carried out, in 611 of which anæsthetics were used. Of those, where no anæsthetic was used, the great majority of the experiments consisted of inoculations into mice and of the exposure of animals to radiations. Government Departments and various local authorities were responsible for some 20,000 experiments, and a great number were performed for the purpose of testing drugs, antitoxic sera, and vaccines.

Meat Journal on National's Slaughter Proposition.

Referring to the N.V.M.A. Bath declaration that in view of the great diversity of opinion on the question of the humane slaughtering of animals for food and the subsequent effect on the flesh by the various methods used, a Government Committee of inquiry, to consist of members of all professions and trades interested, should be instituted to investigate the whole subject, the Meat Trades Journal says: Members of the meat trade have no objection to such an inquiry, if it is run on thorough and practical lines. As far back as 1912 a demonstration arranged by the R.S.P.C.A., given at Islington Cattle Market, was attended by the President and leaders of the National Federation, as well as representatives from all parts of the country. The opinions then expressed and published in these columns were decidely in the main in favour of the pole-axe as being safer, as expeditious, and as humane of the mechanical instrument for cattle. For small animals the "killers" were not regarded with any favour whatever. Next day the carcases of animals slaughtered by the old method were reported to be much better in appearance because of better bleeding than those on which the R.S.P.C.A. instrument had been used. Since then there have been many demonstrations, notably at Belfast and Birmingham, which bore out those opinions.

In view, however, of the publicity recently given to the subject, we believe a Government inquiry such as is suggested by the Veterinary Association would be cordially welcomed by the trade.

An Irish Comment on Mr. Villar's Criticism.

None of the many questions touched upon at the Bath meeting has received wider publicity than Mr. Sidney Villar's warning concerning the idolisation of the 2,000 gallon cow. As a wholesome corrective of the latest example of the incorrigible "stunting" propensities of the press, the following comment on the matter by the Irish Independent reads refreshingly:

Seldom indeed, in these days of cow-testing associations, does one find an adverse critic of heavy-milking breeds. The complaint is, generally, that the average cow is not worth its keep to the farmer. But Mr. Sidney Villar, speaking at the annual conference of the National Veterinary Association at Bath, warned his hearers that the physique of cows yielding 2,000 gallons of milk in a single lactation period must deteriorate, and that detrimental effects would ultimately be produced on all breeds of milk cattle if unnatural methods of forcing were generally adopted. This is an obvious danger—so obvious indeed that there is little likelihood of it being forgotten. The 2,000 gallon milker needs more care than a cow giving 300 gallons if milk in the year. The difference in milk yields makes that additional care well worth while, apart altogether from the market value of the animal. Experts often see too far ahead, and become frightened at a danger which may never arise. Certainly there is no immediate prospect of our Irish cattle becoming delicate through a too rapid increase in the yield of milk. The average here is no more than 400 gallons, between which and 2,000 gallons there is a safe margin for improvement.

Anthrax Prevalence in Forfarshire.

While in previous years five to fifteen cases of anthrax were the average in Forfarshire, during this year there have already been about 50 outbreaks, according to the report by Chief Constable Birnie to a meeting of the Forfarshire Local Authority at Forfar.

Mr. Birnie reported on the recent outbreak at Sandyford, Kirriemuir, where thirteen deaths occurred. He said that these cases had been peculiar in that there had been great effusions of blood from the affected animals. They had thought when they were finished with that outbreak that the danger was over, but on Saturday one of a fresh lot of cattle had been found dead of the disease in the same field as the former deaths had occurred.

Mr. F. M. Batchelor: Were these new cattle being fed with cotton cake?

Mr. Birnie: No, but the former lot were, I believe, heavily fed on the cake.

Mr. Birnie added that there had been 50 cases in the county this year.

Mr. Batchelor: What percentage were fed on cake?

Mr. Birnie: Almost exclusively.

It was pointed out that the authority could do nothing in the matter.

Sleeping Sickness Mission to Tropical Africa.

The Colonial Office has approved proposals made by the Tropical Disease Prevention Association some months ago for further investigation in Africa in regard to the serum treatment of sleeping sickness.

These proposals provide for a pregramme of systematic work extending over about two years, to be carried out by a special mission. The mission will include animals as well as men in their investigations. It is estimated that the cost of the work will be £50,000, and a fund to meet it is being raised by the association.

The mission, it was suggested, should consist of Dr. Marshall and Dr. Vassalo, of the Uganda Medical Service, to whom the new treatment is owing, two assistant medical officers, two veterinary surgeons, and a secretary. The scope of their work was defined under four heads:—

1. To carry out treatment of infected cases by the serum method, and to experiment as to technique and general principles of such treatment.
2. To make observations as regards prevention and immunization from the disease on human beings.

3. To carry out observations on animals to the same end.

4. To report on the present and future conditions as regards sleeping sickness in Uganda, Nigeria, and such other areas as may be approved by the Colonial Office.—*The Times.*

The Cinema in Zoology.

In the course of the first of two lectures on "The Cinema as a Zoological Method," delivered at the Royal Institution, Dr. Chalmers Mitchell said that it was much to be regretted that this gift of science to the world had been used so little for scientific purposes. In zoology it was required, in the first place, as a record of the many rare animals and plants that were now in danger of extermination in most countries. The Zoological Society for the last two years had been doing what it could to take films of all the rare animals which came into its possession, and for that purpose had appointed Mr. Martin Duncan, one of the pioneers in the taking of zoological films, as a permament member of its staff.

Successful studies, even of docile animals, required much time and patience. Living creatures were wayward and capricious, even with their friends, and it often required efforts lasting over weeks to secure successful results. This had a bearing on a topic much under discussion just now, the question of performing animals. From his own experience, said Dr. Chalmers Mitchell, he thought that there were almost no limits, within the range of the natural aptitudes of different kinds of animals, to the possibilities of training by the sole aid of knowledge and kindness and that the results were a legitimate source of interest and of knowledge of comparative psychology. If public audiences were willing to pay their money and wait a whole evening for a moment when an animal was in the mood for a performance he could see many advantages and few evils. But, unfortunately, both managers and the public expected animals to go through their tricks at the exact time when the curtain was rung up for their "turn." For this to be accomplished he had no doubt but that cruelty, prolonged and often revolting, was required in 90 cases out of 100.

Cinema records of animals were required also for the scientific description and classification of the animal kingdom. It was now more and more recognised that even "species" could not be determined or questions of their origin or of the relation of their characters to natural selection be decided merely from the information given by museum specimens. They fitted, or were out of harmony with, their environments not by diagnostic characters but by vital activities. The work of the field naturalist was useful, but the human eye and the human memory were insufficient—for example, from Assyrian sculptors to Victorian painters galloping horses had been drawn in impossible positions, until the instantaneous photographs of the late Mr. Muybridge made it possible to analyse the continuous movements into their true phases.—*The Times.*

Successful Quackery.

Mr. F. A. Parker, M.A., writing to the *Lancet* on the above subject, recalls the case of a notorious herbalist in Sydney, New South Wales, who was prosecuted for practising without a diploma and for obtaining money by false pretences. "He had an enormous practice, and the medical faculty were, very naturally, indignant about it. But when summoned, the man was able to produce incontrovertible evidence that he was a duly qualified medical man. The account he gave of himself was as follows:—'When I started practice as a doctor, I hardly ever got a patient, but I saw several "herbalists" and unqualified men doing an enormous and lucrative business. So, in desperation, I determined to follow their methods, with what success you know. The ignorant public here will pay handsomely for quackery and imposture, but are niggardly towards genuine medical work.'"

Bovine Tubercle and Man.

The case for the present campaign in favour of purer milk is so unanswerably strong that it would be a great pity if it were overstated. In a recent letter to *The Times* a medical correspondent suggested that if Sir Alfred Mond would devote half-a-million of money to the supply of tubercle-free milk to the children of the country, he would soon eliminate surgical tuberculosis. Speaking in Parliament a few days later, Sir Watson Cheyne was credited with the statement that ". . . about 60 per cent. of the various forms of disease in children were due to infection from tuberculous cattle by means of milk . . ." Do the facts as ascertained support such statements as these? Scandinavian experience points definitely in another direction. In a monograph published by Dr. F. Harbitz, professor of pathology at the University of Christiania, and president of the Norwegian National Association for Combating Tuberculosis, present knowledge of tuberculosis is reviewed in the detached and objective light of the bacteriological laboratory and post-mortem room. Prof. Harbitz publishes maps of Norway showing the distribution of tuberculosis in man and cattle, and it is obvious at a glance that the prevalence of the two diseases does not run parallel. He does not think that tuberculosis in cattle appreciably affects the frequency of tuberculosis in man, and he refers to investigations by Dr. A. de Vesche, of Christiania, who examined the types of tubercle bacillus found in 50 tuberculous children chosen at random. Only in 8 per cent. did the cultures conform to the characteristics of the bovine type. Another Norwegian, Dr. Leegaard, invariably found the human type in 20 cases of tuberculous middle-ear disease. At the large agricultural college of Aas in Norway, Dr. J. Thesen noticed that though the cattle were saturated with tuberculosis, and their milk was consumed unboiled by the children of the staff, yet in a period of about 43 years no case of tuberculosis, far less any death from tuberculosis, occurred among these children. Prof. Harbitz finds that proof is yet lacking as to the supposed antagonism of the two types of tubercle bacilli to each other, and he is sceptical about the teaching that bovine tubercle bacilli provoke a comparatively mild disease. Mildness or severity is, he holds, determined rather by localisation, the patient's age, and the quantity of the virus absorbed than by the character of the bacillus itself, and, indeed, the bovine type may well cause fatal miliary and meningeal tuberculosis. In his work on Tuberculosis in India, Dr. A. Lankester gives cogent proofs in support of his view that ". . . in this country surgical tuberculosis, which is in many areas excessively prevalent, is entirely independent of infection from bovine sources." The purveyors of dirty milk must, however, find no excuse in these views for going on still in their wickedness, and the case against dirty milk as a carrier of disease is anyhow so damning that a partial and qualified acquittal on one of many counts leaves the general indictment practically as strong as ever.—*The Lancet.*

Cattle Embargo.

STRONG CRITICISM OF ROYAL COMMISSION'S REPORT.

The Live Stock Defence Committee, which is comprised of leading breeders, the Marquess of Crewe being chairman and Sir Gilbert Greenall vice-chairman, in a review of the report of the Royal Commission on the Importation of Store Cattle, states "that it is hard to believe that any Government could think it advisable to introduce legislation which would affect so adversely a very important section of the community on such a weak and vacillating report," and the Defence Committee considers it advisable to draw up this review of the report in order to be prepared to meet any eventuality. Reference is then made to the fallacious cry of cheap meat, and to the part which it played in an election this year. It may be recalled that the Commission reported that "there were some estimates of the amount of reduction of price to be expected which appear to us to be quite extravagant. During the last

election at Dudley a statement was circulated that the admission of Canadian stores would reduce the price of beef by 6d. per lb., and this figure was supported by some witnesses called before us in favour of admission. We are quite unable to accept it."

In the course of its criticisms the Defence Committee goes very carefully through the conclusions arrived at by the Royal Commission and many of the statements upon which they are presumably founded. It points out that "the bulk of the support for the argument that it is desirable to alter the Diseases of Animals Act of 1896 in order that cattle and sheep may be landed in and disseminated throughout these Islands without any test or quarantine from any country which can, in years to come, prove to the Ministry of Agriculture that it is free from disease came from corporations of large towns, butchers, cattle dealers, a small minority of farmers, one breeder of pedigree cattle, one official of the Scottish Board of Agriculture, and a section of opinion in Canada." Comment is made upon the alleged motives underlying many of these views.

The Committee also discusses the possible introduction of disease, the views of graziers and feeders, and is of the opinion that in regard to the question of restoration of herds the Commissioners did not grasp the real meaning of their terms of reference.—*Morning Post.*

Experiments with Rubber for Cold Storage.—Important developments in the cold storage industry are possible, according to a note in the *Morning Post*, if certain experiments now being carried out at the National Physical Laboratory result as they promise to do. The experiments in question are directed to the object of ascertaining how far rubber may be used as a cold storage insulator. It has been found that indiarubber made cellular and vulcanised, possesses insulating properties superior to any substance at present in use, and it has the additional advantage of extreme lightness. The experiments, however, are not yet concluded; other materials are on trial. Some doubt is expressed among experts. The cost, it is said, would be prohibitive compared with granular cork, which is at present universally used, and has proved efficient, economical, and easy to handle. Nevertheless much interest is centred in the experiments that are being made.

Light Horse Breeding.

At a recent Council Meeting of the Hunters' Improvement Society, Colonel Mildmay reported the results of his negotiations in respect of the renewal of the grant for light horse breeding, and submitted a declaration from the War Office to the effect that the Quartermaster-General considered the continuance of light horse breeding so important that the Army Council would take over the scheme, manage it, and provide the funds. It was therefore decided to place the services of the Society at the disposal of the Army Council in the allocation of the King's premiums at the spring show. The usual invitation was extended to the National Pony Society to hold its 1923 show in the same week as that of the Society. It was agreed that yearlings at the next London show should not be tried for their wind; while the questions of the number of premiums depending upon the entry in any class, and the provision of a new riding class for four-year-olds and upwards, bred by their exhibitors, were deferred until November.

Live Stock Census.

The preliminary statement of the Agricultural Returns collected on June 3rd last gives live stock figures which show a small increase in the number of cattle, but decreases in sheep and pigs. Cows and heifers in milk or in calf are 20,000 more than last year, the total under this head being the largest on record except in 1918 and 1919. The number of heifers in calf is, however, 74,300 less than 1921. The large increase in the number of calves recorded last year has practically been maintained, while the number of yearling cattle is thirty per cent. greater than in 1921. Cattle two years old and above are 78,000 less than last year, for which the heavy slaughter of calves in the spring of 1921 is responsible.

The shortage of keep last winter, which caused an early marketing of feeding sheep, coupled with the very high prices which have ruled for fat sheep, has resulted in a further reduction in our flocks, the total being 395,000 less than a year ago. The decrease is confined to sheep other than ewes and lambs, the breeding stock having been increased.

The large increase in the number of pigs last year has, unfortunately, not been maintained, the return revealing a reduction of 208,000.

We give below the official figures now published, and for comparison those of last year:—

Take in table here

It is of interest, in view of recent discussions on the Canadian cattle question and the shortage of fresh-killed meat, to point out that while in the last ten years the population of England and Wales has increased about two millions, our herds and flocks, compared with the figures of 1912, show the following substantial decreases:—Cattle, 120,000; sheep, over 4½ millions; pigs, 200,000.—*Meat Trades Journal.*

Concerning Clipping.

The late Professor Williams, in his "Principles and Practice of Veterinary Surgery," says:—"With reference to the clipping of horses, I am of opinion that it is a great advantage; they work better after being clipped; thrive on less food; are less liable to disease; are stronger, healthier, and more cheerful; and when sick, recover in a much shorter time." Youatt refers to clipping as a powerful tonic to the animal suffering from the debility, depression of spirits, and temporary loss of appetite associated with growing the winter coat, adding:—"We may not perhaps be able satisfactorily to explain the apparently magical effects of clipping and singeing on the general constitution, and particularly on the wind of the horse or the respiratory functions generally, but there is no doubt of their existence."

The Watering of Horses.

A writer in a military paper points out that officers in command of mounted troops do not, as a rule, pay sufficient attention to the important question of watering horses. The practice of allowing horses when on the march to drink only once a day, which is advocated as being in use among the Arabs, is strongly denounced by this writer, who points out that while in Europe the horses' rations consist almost exclusively of corn and hay, the Arabs give their horses dates, many kinds of plants, and even milk. He maintains that horses fed as they are in European armies should have water three times a day, and as much as they can drink each time. Also, that on the march they should be allowed to drink at every opportunity. In former times men were not permitted to drink while on the march, but now care is taken to let them do so at frequent intervals, it being recognised that the body should be compensated for the moisture it loses in profuse perspiration, and as with the man, so with the horse.

Carbolic Disinfectant Charge.

A strong warning has been issued to farmers generally by the Horsham magistrates against the improper and careless dilution of preparations containing carbolic and other acids, used to combat maggot in sheep. A shepherd was charged with causing unnecessary suffering to sheep through the careless application of disinfectant, and his employer was also summoned for permitting the offence. It was stated that several of the sheep were found to be suffering from the effects of the application of insufficiently diluted carbolic disinfectant. Their wool was burned off and many had large sores with an accumulation of pus. The shepherd said he used one part of the preparation to ten of water, but admitted that the mixture was not carefully proportioned: and the police alleged that some of the disinfectant was diluted with only 4 parts of water,

while some had been applied in its crude state. The magistrate eventually agreed that carelessness on the part of the shepherd did not constitute cruelty, and dismissed the two cases, at the same time recommending that all farmers using a like preparation should have it carefully mixed and thus avoid the risk of causing suffering to the sheep.

The Minister of Agriculture, answering a member in the House of Commons recently, said he was satisfied that the existing regulations, which ensured a period of detention of 14 days for Irish cattle, which had either been sold at the ports or moved to farms direct, thus checking their movement from market to market, provided a real safeguard against the dissemination of foot-and-mouth disease.

An American milk magazine gives the following conversation of a dairyman and a farmer in thirty years' time :—"Everything ready for milking ?"—" I think so, boss." " Cows been scalded ?"—" Thoroughly."—" Have they been fumigated with formaldehyde ?"—" Utterly." —"Have the milkers been boiled ?"—"Of course."—"Have the milk pails been scrubbed with bichloride of mercury ?" —" Every pail."—" Then set the barn on fire, put on rubber gloves, and do the milking."

Correspondence.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.
All correspondence must bear the name and address of the contributor for publication.
The Editor does not hold himself responsible for the opinions of his correspondents.

Veterinary Research.

Royal College of Veterinary Surgeons,
10 Red Lion Square, London, W.C.1,
26th August, 1922.

Sir,—I beg to enclose copies of letters which have passed between the President of the Royal College of Veterinary Surgeons and Viscount Lascelles in connection with his Lordship's recent speeches on the above subject. Lord Lascelles has kindly given permission for both letters to be made public, and I should therefore be greatly obliged if you would kindly publish them in an early issue of your paper.—Yours faithfully,

FRED BULLOCK, *Secretary*.

COPY.

Harewood House, Leeds,
August 21st, 1922.

Dear Sir,—I am grateful for your letter of August 17th, as it enables me to correct certain points which appear to have been misunderstood in my speeches at Northallerton and Harrogate.

Nothing in my speeches could be interpreted to mean that the Royal College of Veterinary Surgeons had power to order one method or another of treating infectious diseases ; nor that the present methods are wrong according to the existing knowledge of the diseases. Such methods have, and must have, the authority of Parliament, although Parliament has, I believe, acted in accordance with the recommendations of the Royal College of Veterinary Surgeons in dealing with the extermination of the disease.

My whole speech at Northallerton was an appeal to farmers to turn, not to Parliament (which has used that power), but to the Royal College of Veterinary Surgeons to improve its scientific research work, and thereby to devise methods which will be less costly to the farmer than the present antiquated ones. Not until this is done can the appeal to Parliament be usefully made.

I regret that my remark about the Syllabus of the Royal College, taken by itself, does not completely state the case. But the following sentence, " the best brains are not satisfied with a higher education which limits them to one subject only," shows that I referred to higher education, and makes it clear that my meaning is very close to yours when you say that " without some such scheme very few men could afford to take up the long and special veterinary course after having obtained a general university education."

If I may say so, it is a scheme to effect this object that I wish to recommend. I am anxious to see the work of Veterinary Research brought more closely into touch with the great centres of pure scientific research and the work of the latter allied to the special branch of Veterinary Science as closely as it is to Medical Science.—I am, Sir, your obedient Servant, LASCELLES.

COPY.

Royal College of Veterinary Surgeons,
17th August, 1922.

To the Rt. Hon. Viscount Lascelles,
Chesterfield House, London, W.

My Lord,—My attention has been called to your Lordship's speech at the Northallerton Agricultural Show and to the numerous press comments thereon.

So far as the speech was concerned with the necessity for research into diseases of animals, I venture respectfully to say that the Royal College of Veterinary Surgeons is and has always consistently been of the same opinion as your Lordship. Unfortunately, as your Lordship will be aware from the recent Report of the Advisory Committee on research into Diseases of Animals, the assistance which the State has hitherto granted for this purpose has been so meagre as to be characterised as a national disgrace. The Royal College itself has no funds with which to encourage such research.

It would appear, however, that your Lordship has been misinformed as to the powers and duties of the Royal College, for this institution has nothing whatever to do with the control of animal diseases. The powers conferred on the Royal College are confined to fixing the subjects of examination qualifying for the Diploma of Membership of the College, appointing examiners, and carrying out the necessary examinations. It has also power to hold examinations for the post graduate Diploma in Veterinary State Medicine, and the Diploma of Fellow of the Royal College of Veterinary Surgeons.

With reference to your Lordship's reported statement that the College " has a syllabus which includes no other form of learning besides Veterinary Science," I cannot but think that the newspaper account does not correctly report your Lordship's words, for the syllabus of the Royal College is as comprehensive for the purpose of training Veterinary Surgeons as is the medical curriculum for any medical degree. I take the liberty of sending your Lordship a copy of the Register of Veterinary Surgeons, containing at pages 83-89 a copy of the Syllabus of Examinations. It will be seen that after passing an approved examination in general education (including English subjects, Mathematics, Latin and French, or any two other approved languages) the veterinary student is required to have a thorough training in Chemistry and Physics, Botany and Zoology, Anatomy of the Domesticated Animals (horse, ox, sheep, pig, dog, cat, and fowl), Histology and Physiology, Animal Management, Shoeing, Pathology, Bacteriology and Protozoology, Materia Medica, Pharmacy, Therapeutics, Toxicology, Hygiene and Dietetics, Veterinary Medicine, Meat Inspection, Veterinary Surgery and Obstetrics. This course of study covers a period of at least four years.

I think your Lordship will agree that this curriculum is sufficiently exhaustive for the training of the general

practitioner in Veterinary Science, and that the reported statement that "the College had a syllabus which included no other form of learning besides Veterinary Science" is at least misleading.

Your Lordship's desire that a method should be devised by which the best brains in the country should be trained and used for the purpose of research into animal diseases is in conformity with the view of the Departmental Committee on the Public Veterinary Services (Cd. 6575, 1913), which recommended that scholarships should be awarded annually to enable men who have received a good scientific education to enter the veterinary profession. It is obvious that without some such scheme very few men could afford to take up the long and special veterinary course after having obtained a general university education, but no effect has yet been given to the recommendation though ten years have elapsed since the Committee reported.

The Royal College of Veterinary Surgeons has never received any assistance from public funds or private benevolence. It has, nevertheless, consistently worked for the advancement of Veterinary Science, and has gradually extended the scope and increased the standard of professional training, powers for which have been obtained from time to time by Supplemental Royal Charters.

For these reasons, and as your Lordship's speech has been widely reported and commented upon in a manner derogatory to the Royal College, I should be glad to have permission to communicate a copy of this letter to the press.—I am, your Lordship's obedient servant, (*Signed*) H. SUMNER, *President*, Royal College of Veterinary Surgeons.

Post-Graduate Courses.

Sir,—Statements have appeared from time to time in the veterinary press as to ample facilities for post-graduate study; but I find that no facilities are avaiable or courses arranged for those wishing to take a short post-graduate course of, say, two or three months' duration and suitable for Ministry of Agriculture Examination or Indian Civil Veterinary Department.

In 1920 the Royal Veterinary College of Ireland held a post-graduate course for Veterinary Inspcetors of the Department of Agriculture arranged for by the latter body, which is the only short post-graduate course I know of held since the war.—Yours faithfully, J. FOX, Ministry of Agriculture.

August 21st, 1922.

National Association of Veterinary Inspectors.

Sir,—With reference to my letter dealing with Veterinary Inspectors' fees. I find that in the *terminal* portion of the letter I have mis-quoted the final reply of the Association of County Councils. The quotation in my letter to you reads as follows:—(it was that) "in view of the complexity of the matters involved, the Committee could make no recommendation."—The quotation in inverted commas should read as follows:—"Owing to the great variation in the scale of fees paid by the different authorities, the Committee could not see its way to make any recommendation."—Your obedient servant, TREVOR F. SPENCER, Hon. Secretary (*pro tem.*) U.A.V.I., Kettering.

August 20th, 1922.

Diseases of Animals Acts, 1894 to 1914. Summary of Returns.

Period.	Rabies. Cases Confirmed. Dogs.	Rabies. Cases Confirmed. Other Animals.	Anthrax. Outbreaks confirmed.	Anthrax. Animals attacked.	Foot-and-Mouth Disease. Outbreaks confirmed.	Foot-and-Mouth Disease. Animals slaughtered as diseased or exposed to infection.	Glanders (including Farcy).* Outbreaks reported by the Local Authorities.	Glanders (including Farcy).* Animals attacked.	Parasitic Mange.* Outbreaks reported by the Local Authorities.	Parasitic Mange.* Animals attacked.	Sheep Scab. Outbreaks reported by the Local Authorities.	Swine Fever. Outbreaks confirmed.	Swine Fever. Swine slaughtered as diseased or exposed to infection
GT. BRITAIN. Week ended 19th August, 1922	...	...	6	7	...	...	...	...	12	13	8	15	3
Corresponding Week in 1921	...	...	7	8	2	70	...	...	24	28	1	22	12
Corresponding Week in 1920	...	...	5	7	...	133	...	...	20	27	1	23	14
Corresponding Week in 1919	2	...	6	6	1	163	1	2	50	80	...	53	23
Total for 33 weeks, 1922 ...	1	...	351	403	1124	54902	1	1	824	1191	428	791	305
Corresponding period in 1921	22	1	337	436	43	2958	8	16	1704	2624	401	842	287
Corresponding period in 1920	4	...	266	319	69	8970	10	17	2960	4990	292	1377	543
Corresponding period in 1919	134	3	129	167	24	1478	18	45	3920	7899	218	1459	641
IRELAND. Week ended 19th August, 1922			...	...	...	...	...	...	Outbreaks ...		1	5	11
Corresponding Week in 1921 ...			...	...	...	...	...	...	1		12	7	38
Corresponding Week in 1920 ...			...	...	...	...	...	...	...		6	...	...
Corresponding Week in 1919 ...			...	...	...	...	...	...	1		1	2	3
Total for 33 weeks, 1922			1	1	...	...	..	...	67		143	159	863
Corresponding period in 1921 ...			...	...	7	77	...	...	66		172	71	384
Corresponding period in 1920 ...			1	1	...	...	1	3	82		180	6	23
Corresponding period in 1919 ...			...	..	...	...	1	1	120		167	22	69

NOTE.—The figures for the current year are approximate only.

Royal Veterinary College, London.

(Founded 1791.)

Principal and Dean :

Prof. Sir John McFadyean, M.R.C.V.S., M.B., B.Sc., LL.D.

MEMBERSHIP DIPLOMA OF THE ROYAL COLLEGE OF VETERINARY SURGEONS.

Complete Courses of Instruction are conducted in all the subjects of the Examination for this Diploma. The facilities, etc., afforded for the practical training of Students are unrivalled.

BACHELOR OF SCIENCE DEGREE, UNIVERSITY OF LONDON.

The Professors of Chemistry, Biology, Anatomy, Physiology, Hygiene, and Pathology are recognised Teachers of the University, and conduct in their respective subjects courses which qualify for the Science Degree (B.Sc.), which may be taken concurrently with the above Diploma.

CLEMENT STEPHENSON ENTRANCE SCHOLARSHIPS.

These Scholarships are of the value of £80 per annum, and are tenable for four successive years. The award will be made on the result of a competitive examination, to be held in September, and the subjects shall be Biology, Chemistry and Physics. Candidates must not be over 18 years of age on the 1st October in the year of examination, and must be the sons of British parents, born in the United Kingdom.

Copies of the Regulations may be obtained at the College.

Two Scholarships will be awarded in September, 1922.

The College Calendar, containing full particulars, will be forwarded on application to The Secretary, Royal Veterinary College, Camden Town, N.W.1.

SERUM LABORATORY, ANTWERP.

(Formerly LABORATORY VANDERHEYDEN, LTD.)
Founded in 1906.

By Appointment to the Belgian Government for Sero-Vaccination against Swine Erysipelas, etc.

Members of the Veterinary Profession may obtain Serum and Vaccines against Swine Erysipelas, Strangles, Tetanus, White Scour, Canine Distemper, Lymphangitis, Polyarthritis, etc., also Tuberculin.

Price List and Instructions sent on application to the Laboratory :

39 et 41 RUE DES MOUCHES, ANTWERP.

Telegrams "LABOSERUM, ANTWERP"

NOW READY. Royal 8vo. Pp. x + 636, with 193 Illustrations.
Price **31s. 6d.** net (Postage 1/- extra).

AN INDEXED SYSTEM OF VETERINARY TREATMENT

A WORK ON MODERN MEDICAL, SURGICAL, AND BIOLOGICAL THERAPY.

By WILLIAM SCOTT, F.R.C.V.S.,

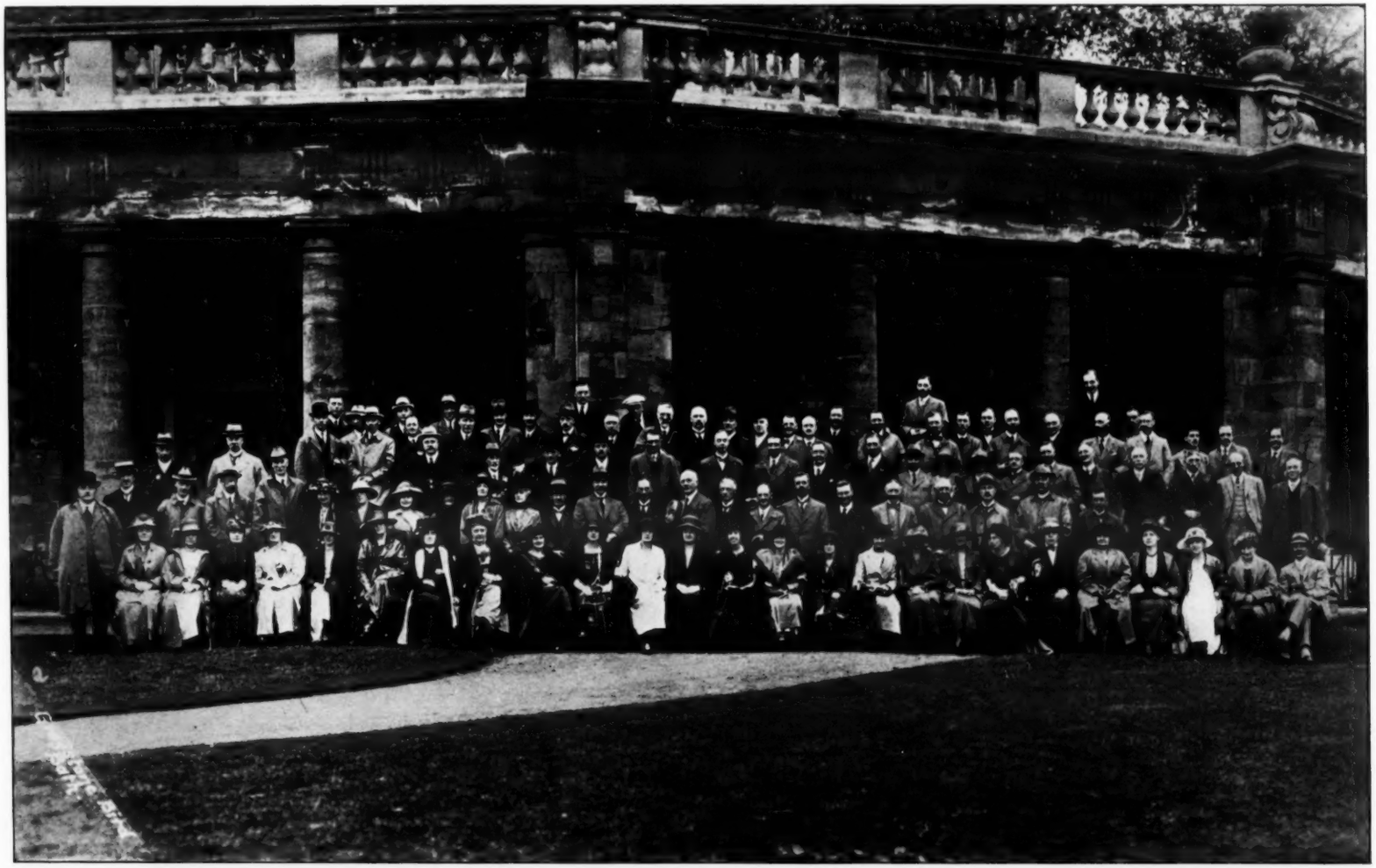
WITH THE COLLABORATION OF VARIOUS WRITERS.

Extract from Preface :–

"In presenting this treatise to the profession, I have for a long time considered that a work dealing specially with the treatment of diseases would serve a useful purpose, for it must be obvious to the most casual observer that the science of medicine has of recent years expanded so enormously that specialization appears to be the inevitable outcome. Any system of comparative medicine comprehensive enough, therefore, to deal with all its branches must ever be, particularly from a reference point of view, cumbersome and unwieldy, which to the busy practitioner is a tangible drawback. It was with the object of making treatment of diseases a speciality that the present work was written, and that it may serve as a ready reference it has been arranged in alphabetical form. The prescription throughout the text, and the observations made upon the lines of treatment advocated, have been put to the acid test of exacting general practice after much thought and prolonged experience. Every endeavour has been made to steer clear of debatable matter where possible, preference being given rather to facts based upon reasoned conclusions."

BAILLIÈRE, TINDALL & COX, 8 HENRIETTA ST., COVENT GARDEN, LONDON, W.C.2.

N.V.M.A. CONGRESS, BATH, 1922.



Many, if not all, of those present at Bath will doubtless desire to possess permanent souvenirs, such as the camera can provide, of a noteworthy and wholly enjoyable occasion.

The photograph reproduced above was taken by Mr. Graystone Bird, and copies, 20in. by 12in., may be obtained for 7/6 (to include packing and postage) from him at 38 Milsom Street, Bath.

Another photograph which may be obtained is a flash-light of the annual banquet (12in.), unmounted, 5/- post free, with group, or alone, 6d. extra.